

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A method for treating dermatological tissue using a filament light source having a broad wavelength spectrum, the method comprising:
directing a treatment exposure from the filament light source to a treatment area;
driving a filament of the filament light source with electrical current so that the treatment exposure has duration of between about 1.2 (one and ~~half~~ two-tenths) seconds and 5 (five) seconds).
2. (original) The method of claim 1 wherein the driving the filament light source with electrical current includes, applying a plurality of pulses of electrical current to the filament.
3. (original) The method of claim 1, wherein the driving the filament light source with electrical current includes, applying a plurality of electrical current pulses to the filament of the filament light source, wherein a first pulse of the plurality of pulses electrical current pulses is the longest pulse of the series of pulses and operates to bring the filament to a temperature which results in the filament light source emitting light.
4. (original) The method of claim 1, further including:
wherein the driving the filament light source includes applying a plurality of electrical pulses to the filament of the filament light source;
sensing a light produced by the filament, and when the power of the light produced drops below a first power level, applying a pulse of electrical current to the filament.
5. (original) The method of claim 1 wherein in response to the electrical current, the filament light source generates light having broad wavelength spectrum with light ranging from below 800 nm to above 2000 nm, and filtering out light below 1050 nm.

6. (original) The method of claim 5 further including filtering light generated by the filament light source, such that wavelengths of light energy that are strongly absorbed by water, are filtered from the light prior to the treatment exposure being applied to the skin.

7. (original) In a system for treating dermatological tissue using a filament light source having a broad wavelength spectrum, a method for generating a temperature profile in a dermatological tissue area being treated, the method including:

applying electrical current to a filament of the filament light source, and wherein in response to the applied electrical current, the filament light source generates a broad spectrum of light including a near infrared component;

applying a cooling surface to an upper surface of the tissue area being treated;

filtering out part of the light generated by the filament light source, and directing light which has not been filtered out to the tissue area being treated, and wherein some of the light filtered out corresponds to wavelengths which are strongly absorbed by water;

wherein a temperature of an upper layer of tissue area being treated can be increased by one or more of the following operations (a) by reducing the amount light filtered out of the light generated by the filament; and (b) by increasing the temperature of the cooling surface.

8. (original) In a filament light system, a method for treating tissue, the method including:

cooling an area of tissue to be treated for an initial time period;

applying a light treatment exposure from a filament light source to the area of tissue; and

cooling the area of tissue for a period of time after the applying of the light treatment exposure.

9. (original) The method of claim 8 further including:

cooling the area of tissue while applying the light treatment exposure.

10. (original) The method of claim 8 further including:
wherein the applying a light treatment includes applying an electrical current to a filament of a filament lamp.
11. (original) The method of claim 10 wherein the applying a light treatment further includes:
filtering wavelengths of light which are strongly absorbed by water.
12. (original) A filament light source for providing a thermal treatment to a tissue area to be treated, the light source including:
a filament lamp which includes a filament having a least a first portion which is disposed in a first tube, and the first portion of the filament includes a second portion which is formed into a helical shape have a first diameter;
wherein the first tube has a second diameter;
wherein the ratio of the second diameter relative to the first diameter is such that the filament lamp cannot be effectively air cooled, when the lamp is driven to provide the thermal treatment to the tissue area;
a flow tube disposed around the first tube which forms an annular flow area around the first tube; and
a cooling fluid disposed in the annular flow region.
13. (original) The filament light source of claims 1 wherein the ratio of the second diameter to the first diameter is less than 5:1.
14. (original) The filament light source of claims 1 wherein the ration of the second diameter to the first diameter is less than 2:1.
15. (new) A method for tightening skin, comprising:
providing a filament light source for delivering light energy to an area of skin;
placing a transmissive material in contact with an upper surface of the skin to be treated;

transmitting light energy from the light source through the transmissive material to the skin;

cooling the transmissive material;

wherein the light energy transmitted to the skin and the cooling of the transmissive material create an inverted temperature profile in the skin, such that the upper surface of the skin is cooler than an area of skin below the upper surface, wherein the skin is tightened as a result of heating of dermis in the area of skin below the upper surface.

16. (new) The method of claim 15 further comprising, starting the cooling of the transmissive material prior to transmitting light energy to the skin.

17. (new) The method of claim 16 further comprising, continuing the cooling of the transmissive material during the transmission of light to the skin.

18. (new) The method of claim 17, further comprising, continuing the cooling of the transmissive material after the termination of the transmission of light to the skin.

19. (new) The method of claim 15, wherein light energy is transmitted through the transmissive material to the skin for a continuous period of time of between approximately 1.2 (one and two-tenths) seconds and 5 (five) seconds.

20. (new) The method of claim 19 further comprising, starting the cooling of the transmissive material prior to transmitting light energy to the skin.

21. (new) The method of claim 20 further comprising, continuing the cooling of the transmissive material during the transmission of light to the skin.

22. (new) The method of claim 21, further comprising, continuing the cooling of the transmissive material after the termination of the transmission of light to the skin.

23. (new) A method for tightening skin, comprising:
providing a broadband light source for delivering light energy to an area of skin;
placing a transmissive material in contact with an upper surface of the skin to be treated; and
transmitting light energy from the light source through the transmissive material to the skin, wherein light energy is transmitted through the transmissive material to the skin for a continuous period of time of between approximately 1.2 (one and two-tenths) seconds and 5 (five) seconds.
24. (new) The method of claim 23 further comprising:
cooling the transmissive material; and
wherein the light energy transmitted to the skin and the cooling of the transmissive material create an inverted temperature profile in the skin, such that the upper surface of the skin is cooler than an area of skin below the upper surface, wherein the skin is tightened as a result of heating of dermis in the area of skin below the upper surface.
25. (new) The method of claim 23 further comprising, starting the cooling of the transmissive material prior to transmitting light energy to the skin.
26. (new) The method of claim 23 further comprising, continuing the cooling of the transmissive material during the transmission of light to the skin.
27. (new) The method of claim 23, further comprising, continuing the cooling of the transmissive material after the termination of the transmission of light to the skin.
28. (new) A Dermatological treatment system including:
a filament lamp;
a power supply coupled to the filament lamp, wherein the power supply provides electrical current to the filament lamp to drive the filament lamp to output light to provide a dermatological treatment to an area of skin;

a controller coupled to the power supply; and
a sensor for detecting an amount of light output by the filament lamp, and for providing a feedback signal to the controller, wherein the controller operates to control the operation of the power supply based on the feedback signal.

29. (new) The dermatologic treatment system of claim 28 wherein the controller operates to control the power supply such that the filament lamp is driven to output a treatment period of light in the range of 1.2 (one and two-tenths) seconds to 5 (five) seconds.

30. (new) The dermatologic treatment system of claims 28 or 29 wherein a filter is positioned between the filament lamp and the area of skin, and the filter operates to filter light energy which is strongly absorbed by water.

31. (new) The dermatologic treatment system of claims 28 or 29 wherein a filter is positioned between the filament lamp and the area of skin, and the filter operates to filter light energy which is strongly absorbed by water, wherein the filter is a water filter which is positioned around the filament lamp.